ABSTRACT

A system for detecting and analyzing electrical activity in the anatomy of an organism underlying an electrode array provides signals corresponding to electrical activity adjacent each electrode. Such signals are correlated to the

5   underlying anatomy of the organism and representative outputs presented through various types of output devices. Such outputs may include variations in coloration or other qualities in correspondence with representations of underlying anatomical structures. The system includes novel electrode structures (200, 224, and 284) and methods for producing and attaching

10   electrode arrays (240 and 280) to the organism. The exemplary form of the invention is used in connection with the diagnosis of muscle activity in the lower lumbar regions of humans. Levels of muscle activity detected are analyzed by correlation with the muscular structures underlying the electrode array. Forms of the invention may be used in other applications.